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Mr. Cesar Lee (3HW21)
USEPA - Region III
841 Chestnut Building
Philadelphia, PA 19107

Dear Cesar:

SUBJECT: SUMMARY LETTER OF WORK PLAN MEETING ON NOVEMBER 13, 1990
CROYDON TCE SITE, BRISTOL TOWNSHIP, PENNSYLVANIA
ARCS CONTRACT NO. 68-W8-0092; WORK ASSIGNMENT NO. 92-16-3NM7

As per our meeting yesterday (November 13, 1990), it was mutually agreed upon that an additional round of ground-water sampling be performed prior to initiating field activity under the current (RD) Scope of Work. Also, as you directed, the Tetra Tech Work Plan will now be submitted for review by November 21, 1990. This Work Plan will include input/modifications from the November 13, 1990 meeting and will be consistent with the USEPA's Scope of Work as detailed in the work assignment and ROD. However, the final direction or scope of this design project may deviate from the Work Plan and ROD depending on the results obtained from the additional round of proposed sampling.

An additional round of sampling is necessary to help determine the extent and magnitude of the ammonium sulfate plume with respect to the "hot spots" areas of TCE contamination. Information available from the BCM report on ammonium sulfate (June 1988) indicated that the ammonium sulfate plume has migrated northward and may very well overlap portions of the TCE plume. Due to possible inaccuracies in contaminant (ammonium sulfate) contouring based on extrapolated data, it is questionable at this time as to what impact this will have on the current approach stated in the ROD. In addition, much of the existing data is not current (pre-1986) and therefore, may not be representative of current conditions.

It is extremely important for design considerations to know how and to what extent the pump and treatment system for TCE will be effected when other contaminants (i.e., ammonia, sulfate, acetone) are introduced. Air stripping, which will effectively remove volatile organics such as TCE from ground water, will not effectively treat ammonia or sulfate without additional pretreatment

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Re: 5e (0,2)

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November 14, 1990
TCN 4216-01

According to Letter,
WE MAY BE DRAWING IN
& TREATING RONA & HAAS'
PLUME. PLEASE ADVISE

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as would be necessary to comply with ARARs. Also, the ROD states that the extraction system should not influence migration of the ammonium sulfate plume from the Rohm and Haas property.

The additional round of ground-water sampling would include the following sample locations (see Figure 1):

- | | |
|--------------|--------------|
| 1. CR-4-50 | 9. CR-25-34 |
| 2. CR-20-38 | 10. CR-19-37 |
| 3. CR-21-38 | 11. CR-25-13 |
| 4. CRMW-15-D | 12. CR-19-15 |
| 5. CRMW-15-S | 13. CR-21-17 |
| 6. CR-22-18 | 14. CR-21-27 |
| 7. CR-29-58 | 15. CR-4-20 |
| 8. CR-3-48 | 16. P-6-20 |

The samples should each be analyzed for TCE, acetone, ammonia and sulfate. As discussed during the November 13, 1990 meeting, sampling/analysis may be performed by EPA, PADER or Tetra Tech depending on scheduling and availability.

Upon evaluation of sample data, several options may exist for course of action including:

A. Minimal or no presence of contaminants (other than TCE)

Option 1: Continue with existing work plan approach to pump and treat TCE contamination as per ROD and current work assignment.

B. Presence of other contaminants (other than TCE)

Option 2: Avoid pumping in ammonium sulfate contamination area.

Option 3: Extraction as per ROD, but discharge to POTW.

Option 4: Extraction as per ROD, on-site treatment to include physical (air stripping), as well as chemical pre-treatment for other contaminants.

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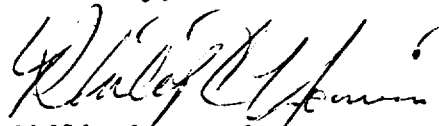
Option 5: a. Pump and treat TCE (only) contaminated ground water on-site per ROD.

b. Extract and discharge TCE (and other) contaminated water to POTW.

It is important to note that liability and enforcement issues must be considered if treatment of ammonium sulfate contaminated ground water is part of the preferred option.

I hope that you will find this summary complete and accurate, as well as helpful in simplifying project alternatives. If you have any questions, you may contact me at your earliest convenience.

Sincerely,



Philip C. Younis
Manager, Hazardous/Solid
Waste Management Department

jgm

Attachment

cc: James McKenzie, USEPA
Ragesh Patel, PADER
Kathy Davies, USEPA

P. Anderson (3HW21) 11-23-90

J. Sharke (3PES1) 11-23-90

H. Harbold (3HW01) 11-23-90

C. ATKINSON (3HW64) 7-31-91

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